

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-39. (Canceled)

40. (Currently Amended) An alarm for detecting radiation and/or pollutants having:

a housing ~~means~~;

an alarm circuit including a detector capable of detecting ~~including detection means for detecting~~ said radiation and/or pollutants;

a first electrical connection directly connected ~~means connectable~~ to one of an external live power cable of a main circuit and a light side of a switch for a lighting circuit for supplying external power to said alarm circuit;

a second electrical connection connectable ~~means for connection~~ to said light side of said switch for the lighting circuit, wherein the first electrical connection supplies external power to the alarm circuit independent of the connection to the second electrical connection;

a circuit ~~means~~ connecting said first electrical connection ~~means~~ to said alarm circuit for supplying said external power to said alarm circuit;

a first switch ~~means~~ mounted on said alarm housing and actuable by a user to generate a respective pulse for each actuation thereby;

and a control circuit ~~means~~ responsive to receipt of a preselected number of pulses, from either the second electrical connection or the first switch, over a preselected time period to apply a preset control signal to said alarm circuit;

wherein said alarm circuit is responsive to said preset control signal to reset or test said alarm in dependence on said preset control signal, ~~and~~

~~wherein said first and second electrical connection means are separate devices.~~

41-45. (Canceled)

46. (Currently Amended) An alarm as claimed in claim 40 wherein:

said second electrical connection ~~means~~ is operable to receive pulses caused by user actuation of said first switch ~~means~~ between its on and off states and apply said pulses to said control circuit~~means~~ thereby to cause a preset control signal to be applied to said alarm circuit in response to generation of said preselected number of pulses over said preselected time period.

47. (Currently Amended) An alarm as claimed in claim 40 further comprising a switch ~~means~~ for an external light source and actuatable in response to generation of a preselected control signal to ~~energise~~energize said light source.

48. (Currently Amended) An alarm as claimed in claim 40 further comprising a relay and a light source wherein said relay is actuatable in response to generation of a preselected control signal to ~~energise~~energize said light source.

49. (Currently Amended) An alarm as claimed in claim 40 wherein when said preselected number of pulses over said preselected time period is one, said control circuit~~means~~ is operable to apply a preset control signal to said alarm circuit thereby to reset said alarm.

50. (Currently Amended) An alarm as claimed in claim 40 wherein when said preselected number of pulses over said preselected time period is one, said control circuit~~means~~ is operable to apply a preset control signal to said alarm circuit thereby to test said alarm.

51. (Currently Amended) An alarm as claimed in claim 40 wherein when said preselected number of pulses over said preselected time period is two, said control

circuit~~means~~ is operable to apply a preset control signal to said alarm circuit thereby to test said alarm.

52. (Currently Amended) An alarm as claimed in claim 50 wherein when said preselected number of pulses over said preselected time period is two, said control circuit~~means~~ is operable to apply a preset control signal to said alarm circuit thereby to reset said alarm.

53. (Currently Amended) An alarm circuit as claimed in claim 40 wherein said alarm circuit ~~comprises means~~ is capable of ~~for~~ reducing the sensitivity of said ~~detection means~~ detector.

54. (Currently Amended) An alarm as claimed in claim 53 wherein the capability of the alarm circuit to reduce ~~said means for reducing~~ the sensitivity of said ~~detector~~ detection means is operable in response to generation of a reset control signal by said control circuit~~means~~ to reduce the sensitivity of said ~~detection means~~ detector for a preselected time period thereby to reset said alarm.

55. (Currently Amended) An alarm circuit as claimed in claim 40 wherein said alarm circuit ~~comprises means for~~ is capable of increasing the sensitivity of said ~~detection means~~ detector.

56. (Currently Amended) An alarm as claimed in claim 55 wherein the capability of the alarm circuit to increase ~~said means for increasing~~ the sensitivity of said ~~detection means~~ detector is operable in response to generation of a test control signal by said control circuit~~means~~ to increase the sensitivity of said ~~detector~~ detection means for a preselected time period thereby to test said alarm.

57. (Previously Presented) An alarm as claimed in claim 40 further comprising: a battery for supplying power to said alarm.

58. (Currently Amended) An alarm as claimed in claim 57 further comprising:

a charging circuit including said first electrical connection ~~means~~ for supplying power to a power rail for said alarm circuit and for charging said battery.

59. (Currently Amended) An alarm as claimed in claim 57 further comprising an ~~isolator~~ ~~isolating means~~ for selectably electrically disconnecting said battery from said alarm circuit thereby to ~~minimise~~ minimize leakage from said battery when said alarm is inactive.

60. (Currently Amended) An alarm as claimed in claim 59 wherein:
said ~~isolating means~~ isolator comprises a second switch ~~means~~ in said power rail switchable between a first, conducting state connecting said battery to said alarm and a second, non-conduction state disconnecting said battery from said alarm.

61. (Currently Amended) An alarm as claimed in claim 60 wherein said charging circuit comprises a third switch ~~means~~ switchable between a first, conducting state and a second, non-conducting state in dependence on the voltage on said power rail;
and wherein:

when said third switch ~~means~~ is in said first, conducting state said third switch ~~means~~ is operable to retain said isolating second switch ~~means~~ in its conducting state;

and when said third switch ~~means~~ is in said second, non-conducting state the state of said third switch ~~means~~ is dependent on the voltage on said power rail such that said second switch ~~means~~ is non-conducting in response to said voltage on said power rail being below a preselected value indicating a low battery charge, thereby to disarm said alarm during charging of said battery.

62. (Currently Amended) An alarm as claimed in claim 61 further comprising a disconnect ~~disconnect means~~ actuable to switch said third switch ~~means~~ into its non-conducting state thereby disabling said third switch ~~means~~ and preventing actuation of said alarm.

63. (Currently Amended) An alarm as claimed in claim 62 wherein said ~~disconnectordisconnect means~~ comprises a ~~button-means~~ movable between a first, OFF position wherein said ~~third switch-means~~ is rendered non-conducting and a second, ON position wherein said ~~third switch-means~~ is enabled.

64. (Currently Amended) An alarm as claimed in claim 62 wherein:
said ~~third switch means~~ is a multi electrode semiconductor device having a control electrode for controlling conduction between further electrodes thereof;
and said button ~~means~~ is movable into its first, OFF position to vary the potential on said control gate ~~means~~ thereby to render said ~~third switch-means~~ non-conducting.

65. (Currently Amended) An alarm as claimed in claim 63 wherein:
said housing comprises:
a first backing plate for mounting on a surface;
a second backing plate detachably mountable on said first backing plate;
and a cover ~~means~~ for covering said backing plates;
and wherein the arrangement of said ~~disconnectordisconnect means~~ is such that engagement of said second backing plate on said first backing plate moves said ~~disconnectordisconnect means~~ into its second, ON position thereby to enable said ~~third switch-means~~ and disengagement of said second backing plate from said first backing plate moves said ~~disconnectordisconnect means~~ into its first, OFF position thereby to disable said ~~third switch means~~.

66. (Currently Amended) An alarm as claimed in claim 59 further comprising ~~an indicatorindicator means~~ operable in response to power on said voltage rail downstream of said ~~isolatorisolating means~~ to indicate that said alarm is enabled.

67. (Currently Amended) The alarm of claim 40, further comprising:

a light switch~~means~~ for a light source, said light switch~~means~~ being actuable in response to triggering of said alarm to ~~energise~~energize said light source.

68. (Currently Amended) The alarm of claim 67 wherein said light switch ~~means~~ comprises a relay and said light source is external to said alarm.

69. (Previously Presented) The alarm of claim 67 wherein said light source is mounted in said alarm.

70. (Withdrawn) An alarm for detecting radiation and/or pollutants such as smoke, carbon monoxide or the like having:

a housing means;

an alarm circuit including detection means (DET1) for detecting said radiation and/or pollutants;

a battery (B1) for supplying power to said;

and an isolating means for selectably electrically disconnecting said battery from said alarm thereby to minimise leakage from said battery when said alarm is inactive.

71. (Withdrawn) An alarm as claimed in claim 70 further comprising:

first electrical connection means (PL1, PL2) connectable to an external power supply for supplying power to said alarm circuit;

and a charging circuit including said first electrical connection means (PL1, PL2) for supplying power to a power rail for said alarm and for charging said battery.

72. (Withdrawn) An alarm as claimed in claim 70 wherein:

said isolating means comprises a second switch means in said power rail switchable between a first, conducting state connecting said battery (B1) to said alarm and a second, non-conduction state disconnecting said battery from said alarm.

73. (Withdrawn) An alarm as claimed in claim 71 wherein said charging circuit comprises a third switch means (TR5) switchable between a first, conducting state and a second, non-conducting state in dependence on the voltage on said power rail;

and wherein:

when said third switch means (TR5) is in said first, conducting state said third switch means (TR5) is operable to retain said isolating second switch means (TR3) in its conducting state;

and when said third switch means (TR5) is in said second, non-conducting state the state of said third switch means (TR5) is dependent on the voltage on said power rail such that said second switch means (TR3) is non-conducting in response to said voltage on said power rail being below a preselected value indicating a low battery charge, thereby to disarm said alarm during charging of said battery (B1).

74. (Withdrawn) An alarm as claimed in claim 72 further comprising a disconnect means actuable to switch said switch means (TR3) into its non-conducting state thereby disabling said switch means and preventing actuation of said alarm.

75. (Withdrawn) An alarm as claimed in claim 74 wherein said disconnect means comprises button means movable between a first, OFF position wherein said switch means (TR3) is rendered non-conducting and a second, ON position wherein said switch means (TR3) is enabled.

76. (Withdrawn) An alarm as claimed in claim 74 wherein:
said switch means (TR3) is a multi electrode semiconductor device having a control electrode for controlling conduction between further electrodes thereof;
and said button means is movable into its first, OFF position to vary the potential on said control gate means thereby to render said switch means (TR3) non-conducting.

77. (Withdrawn) An alarm as claimed in claim 75 wherein:

said housing comprises:

a first backing plate for mounting on a surface;

a second backing plate detachably mountable on said first backing plate;

and a cover means for covering said backing plates;

and wherein the arrangement of said disconnect means is such that engagement of said second backing plate on said first backing plate moves said disconnect means into its second, ON position thereby to enable said switch means (TR3) and disengagement of said second backing plate from said first backing plate moves said disconnect means into its first, OFF position thereby to disable said switch means (TR3).

78. (Withdrawn) An alarm as claimed in claim 71 further comprising indicator means (LED1) operable in response to power on said voltage rail downstream of said isolating means to indicate that said alarm is enabled.

79. (Currently Amended) An alarm as claimed in claim 40 wherein:

when said first or second electrical connection ~~means~~ is connected to said light side of said light switch for the lighting circuit said second electrical connection ~~means~~ is operable to receive pulses caused by user actuation of said light switch between its on and off states and apply said pulses to said control circuit ~~means~~ thereby to cause a preset control signal to be applied to said alarm circuit in response to generation of said preselected number of pulses over said preselected time period.